

costa sinistra obliqua squamosi marginata; apertura ovata; columella tortuosa; canalis meliocriter productus, leviter arcuatus.

Long. 28, diam. 16 mm.

Hab. Kii, Japan.

This strikingly beautiful shell, though having points of resemblance, may be very readily distinguished from its congeners. Compared with *L. deburghiæ*, Reeve, it is much more elevated and acute, and the produced scales or spines at the angle are much narrower and more erect. Compared with *L. diadema*, A. Adams, it has no second angle or armed keel below the periphery, where it is convexly rounded, and the spines at the angle are not hooked, but obliquely erect and sharp.

Calliostoma aculeatum, sp. n. (Fig. 3.)

Testa conico pyramidalis, pallide straminea et grisea, fusco maculata; spira elata, acuta; anfractus 9, convexi, leviter biangulati, undique liris angustis densissimis inæqualibus pulcherrime aculeato-granulosis fusco articulatis spiraliter sculpti; liris 2 majis conspicuis; anfractus ultimus latiusculus, parce triangulatus; basis leviter convexa, dense hirata, liris fusco articulatis; columella oblique rectiuscula, albo, callosa; umbilicus clausus; apertura subquadrata, intus margaritacea; peristoma tenue, serratum. Alt. 22, lat. 21 mm.

Hab. Kii, Japan.

A beautifully sculptured species, somewhat resembling *C. consors*, Lischke, but with a higher, more acute spire; and while that species is comparatively smooth, this is closely covered with narrow ridges of unequal size, but all densely beaded with sharp prickly scales or nodules.

L.—A Revision of the Asilidæ of Australasia.

By GERTRUDE RICARDO.

IN a collection of Diptera sent me several years ago by Mr. French from the Melbourne Museum, for determination, were a certain number of Asilidæ. In attempting to name them I found great confusion in the nomenclature of the species, and of their generic place, from Australia. The following paper is an attempt to clear up some of these errors, but no doubt there will still be much to revise when more material is available. The majority of the old species were described by Macquart and Walker, who both worked at about the same time—Walker from 1849–1856 and Macquart from 1838–1855; in consequence there are very

many synonyms between these two authors. Since then a few species have been described by Schiner and Thompson, and a few older ones were described by Wiedemann and Fabricius.

Most of Macquart's species have been seen by me in the Paris Museum through the kindness of M. Bouvier, and in especial of M. Surcouf, and compared with Walker's species in the Brit. Mus. Coll.

The pagination here used for Macquart's Dipt. Exot. is that of the original work, first published in Mém. Sci. Agri. et Arts de Lille, 1838–1855; the one usually used is unfortunately that of the reprint, which did not retain the original pagination. Priority is given to Macquart's names over those of Walker as a rule, as the descriptions appear the best. Williston and Hine are followed in placing the genus *Leptogaster* in a separate subfamily and in the arrangement of the subgenera of *Asilus*.

The species from Australia, New Zealand, and Tasmania only, are described; those from other parts of the Australasian Region are, as a rule, merely given with their references. Judging from Walker's species, not many of the species of the continent extend beyond it.

All types are in the British Museum Coll. unless otherwise specified.

Asilidæ.

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| 1. Marginal cell of wings open | 2. |
| Marginal cell of wings closed..... | 3. |
| 2. Antennæ with a slender terminal arista. Very slender species | <i>Leptogastrinæ</i> . |
| Antennæ with no slender terminal arista, but with or without a terminal style or bristle | <i>Dasypogoninæ</i> . |
| 3. Antennæ with a terminal bristle | <i>Asilidæ</i> . |
| Antennæ usually without a terminal bristle | <i>Laphrinæ</i> . |

LEPTOGASTER, Meigen.

Illiger's Magazine f. Ins. ii. p. 269. 53 (1803).

Gonyptes, Latr. Hist. Nat. d. Crust. et d. Ins. xiv. p. 309. 477 (1804).

The following species are recorded from Australasia:—

Leptogaster geniculatus, Macq., Dipt. Exot. Suppl. 4, p. 400, pl. ix. fig. 6 (1849). [*Leptogaster pedanius*, Walker, List Dipt. ii. p. 484 (1849), et vii. Suppl. 3, p. 774 (1855).¹]

Leptogaster antipoda, Bigot, Ann. Soc. Entom. France, (5) viii. p. 445 (1878).

To these are here added three new species—*L. australis*, *bancrofti*, *dissimilis*.

Leptogaster geniculatus, Macq.

Leptogaster pedanius, Wlk.

Macquart's type seen in Paris Museum, 12. 4. 11, a male from Tasmania.

Walker's type a male from New South Wales.

In Brit. Mus. Coll. are females and a male from Burpengary, S. Queensland (*T. L. Bancroft*), 1904.

A small species, with clear wings, yellowish legs, thorax and abdomen black.

Length 9-10 mm.

In Macquart's type the *legs* are somewhat darker than in those of Walker's type. The first two joints of the *antennæ* in Macquart's type are reddish, not black as stated, and the small transverse vein of the *wing* is in the middle of the discal cell, not very near the base as shown in figure.

Macquart's description is as follows:—

Length 5 lines. ♂.

Palpi with white hairs. Beard and moustache white; face with yellowish tomentum. Forehead brown. Antennæ: the first two joints black (in reality reddish), the third wanting. Abdomen: anterior and posterior borders of segments ashy grey. Legs fawn-coloured, with coxæ grey; some black colour on the anterior and middle legs; posterior legs wanting. Wings clear. From Tasmania.

To this the following particulars may be added:—*Thorax* greyish, with three black short stripes. Knees of *legs* narrowly black, apices of tarsi also black; bristles on the last four tarsi and on the apex of the first hind tarsus black, elsewhere pale yellowish. The small cross-vein of the *wing* is at or slightly below the middle of discal cell and the fourth posterior cell is pedunculated at its base; the cross-vein closing the second basal cell joins the pedunculated part at about the middle. The wings are shorter than the body, measuring 5-6 mm.

Leptogaster antipoda, Bigot.

From Tasmania.

Described as having testaceous legs, the posterior femora widely brown at base, with another narrower brown band before the apex.

Leptogaster bancrofti, ♂ ♀, sp. n.

Type (♂) from Mr. French's Coll., Victoria (1898).

Type (♀) from Queensland (1909) (*Dr. Bancroft*).

A black species with yellowish legs, but the hind legs darker, almost wholly black. Wings clear, the small cross-vein at the middle of discal cell, and the cross-vein closing second basal cell also joining the stalk of fourth posterior cell at about the middle. Length 12 mm.; wings 6-7 mm. *Face* covered with greyish tomentum, the moustache yellow. *Antennæ* black. *Forehead* the same as face. *Thorax* reddish

brown or reddish grey, with a median and lateral black stripes, sides of thorax ashy grey. *Abdomen* black, with well-marked grey segmentations. *Legs* reddish yellow, the knees of fore legs and joints of tarsi black; the posterior femora blackish on apical half, the extreme apex red; the posterior tibiæ almost wholly blackish; the first joint of hind tarsi pale yellow, black at its apex, and the other joints chiefly black; bristles of tarsi black, except on the first joint, where they are yellowish.

Leptogaster australis, ♂, sp. n.

Type (♂) and another from Townsville, Queensland (F. Dodd), 1903.

A species distinguished from *L. geniculatus*, Macq., by its larger size, by the reddish-brown thorax with one median black stripe, and by the cross-vein closing the second basal cell joining the peduncle of the fourth posterior cell at two-thirds of its length.

Length 14 mm.

Face covered with silvery-grey tomentum, the scanty moustache pale yellow. *Antennæ* black, the first two joints reddish. *Forehead* yellowish above the antennæ, black at the vertex. *Thorax* reddish brown, with greyish tomentum on dorsum, bordering the black stripe, which does not reach the posterior border; sides covered with yellowish tomentum, breast reddish brown; *scutellum* same colour as thorax. *Abdomen* obscurely yellow, covered with grey tomentum; the last three segments blackish, with very fine whitish pubescence; genitalia reddish; underside blackish. *Legs* reddish yellow, the first joint of the tarsi paler, almost white, the remaining joints reddish brown; knees black and the apical two-thirds of the hind tibiæ are reddish brown; tibiæ with scattered white bristles; pubescence on legs very slight, most noticeable on the hind pair, where it is almost wholly white; coxæ reddish brown, with white tomentum. *Wings* hyaline, tinged with brown on the basal half; this is hardly noticeable in the second male; all cells open: the cross-vein at or beyond the middle of discal cell. Halteres yellow.

Leptogaster dissimilis, ♀, sp. n.

Type (♀) and another from Stannary Hills, N. Queensland, about 3000 feet (Dr. T. L. Bancroft), 1909; and another female from Queensland from the same collector.

A handsome species, distinguished by the reddish-yellow legs marked with black on the knees, and with the apical half of the club-shaped hind femora deep black; the apices of tibiæ, the hind pair widely, black.

Length 16 mm.

Face greyish yellow, the scanty moustache pale yellow. *Antennæ* black, the second joint reddish. *Forehead* darker than face. *Thorax* reddish brown, blackish in the centre, sides with yellowish tomentum. *Abdomen* blackish, the first four joints almost wholly reddish yellow, in the other female not so distinctly so, only the first two joints being dull yellowish. *Legs* reddish yellow; the knees, apical half of hind femora, apices of tibiæ, and all the tarsi except the first joint black. *Wings* tinged yellow at base, the small cross-vein about the middle of discal cell, the cross-vein closing the second basal cell joins the stalk of fourth posterior cell at two-thirds of its length.

This species is distinguished from *Leptogaster bancrofti* by its larger size, the yellow base of abdomen, the yellow tomentum on sides of thorax, the posterior tibiæ less widely black, and by the situation of the cross-vein closing second basal cell.

The following species are recorded from other parts of the Australian Region :—

- L. albimana*, Wlk., from Aru.—Type in B. M. Coll., much damaged. Hind legs with black or brown bands. Röder records it from Ceylon.
- L. annulipes*, Dol., from Amboina.
- L. angelus*, Ost.-Sack., from Celebes.
- L. exacta*, Wlk., from New Guinea.—Type in B. M. Coll.; also with brown bands on the hind legs.
- L. ferruginea*, Wlk., from Aru.—Type in B. M. Coll.; also with black or brown bands on the hind legs.
- L. fulvipes*, Bigot, from New Guinea.
- L. habilis*, v. d. Wulp, from Timor.
- L. hirticollis*, v. d. Wulp, from Timor.
- L. inflata*, Ost.-Sack., from Celebes.
- L. longipes*, Wlk., from Aru.—Type in B. M. Coll.; much damaged, with very slender legs.
- L. magnicollis*, Wlk., from Ceram.—Type in B. M. Coll.; a very large robust yellowish species.
- L. moluccana*, Dol., from Amboina.
- L. munda*, Wlk., from Celebes.—Type in B. M. Coll.; bands present on hind legs.
- L. tarsalis*, Walk., from Batjan and Ceram.—Type in B. M. Coll., with brownish legs, the first joint of tarsi white.
- L. unicolor*, Dol., from Amboina.
- L. varipes*, v. d. Wulp, from Padang.

All the Walker types have the fourth posterior cell pedunculated. From a cursory examination of the descriptions of species of the other authors these types do not appear to be identical with any.

DASYPOGONINÆ.

The following genera are represented in the Australasian Region :—

Danalis, Fabr.; *Acnephalum*, *Codula*, *Microstylum*, *Brachyrrhopala*, Macquart; *Cabasa*, *Phellus*, Walker; *Bathypogon*, *Saropogon*, *Stenopogon*, *Stichopogon*, Loew; *Chrysopogon*, Röder; *Deromyia*, Philippi. New genera added: *Neocyrtopogon*, *Neosaropogon*, *Psilozona*, *Rachio-pogon*. Of doubtful occurrence the following: *Ancylorrhynchus*, Latr.; *Selidopogon*, Bezzi.

Table of Genera.

1. Fore tibiae with a curved spine	2.
Fore tibiae with no such curved spine	10.
2. Third joint of antennæ usually with no very distinct terminal style	3.
Third joint of antennæ with a distinct terminal style	9.
3. Thorax humpbacked, bright-coloured. All posterior cells open. Small species	<i>Cabasa</i> , Wlk.
Thorax not humpbacked or bright-coloured. Posterior cells not always open	4.
4. Thorax armed with a stout spine on each side	<i>Chrysopogon</i> , Röder.
Thorax not armed with a stout spine on each side	5.
5. Abdomen club-shaped, narrower at base . .	<i>Brachyrrhopala</i> , Macq.
Abdomen not club-shaped nor narrower at base	6.
6. Face very convex	<i>Neocyrtopogon</i> , g. n.
Face not very convex	7.
7. Antennæ notched at apex of third joint . .	<i>Rachio-pogon</i> , g. n.
Antennæ not notched at apex of third joint.	8.
8. Fourth posterior cell narrowed at border or open	<i>Neosaropogon</i> , g. n.
Fourth posterior cell closed far from border	<i>Deromyia</i> , Philippi.
9. Fourth posterior cell open or closed. Small species	<i>Saropogon</i> , Loew.
10. No pulvilli to tarsi. Hairy species, bee-like in appearance	<i>Acnephalum</i> , Macq.
Pulvilli present. Species not hairy or bee-like in appearance	11.
11. Second posterior cell encroaching on the first cell	<i>Microstylum</i> , Macq.
Second posterior cell not encroaching on the first cell	12.
12. Very large species. Middle tibiae with a stout prolongation	<i>Phellus</i> , Walk.
Not very large species. Middle tibiae simple	13.
13. Abdomen club-shaped. Moustache confined to oral opening	<i>Codula</i> , Macq.
Abdomen not club-shaped. Moustache not always confined to oral opening . . .	14.
14. Moustache reaching antennæ. Face with a tubercle	15.
Moustache not reaching antennæ. Face with no tubercle	16.

15. Face fairly broad, with tubercle nearly reaching the antennæ. Fourth posterior cell closed, in a parallel line or nearly so with the vein closing discal cell *Bathypogon*, Loew.
 Face very narrow, and narrower at antennæ, with a heel-shaped tubercle reaching nearly to the antennæ. Fourth posterior cell closed or narrow, not parallel with discal cell *Stenopogon*, Loew.
16. Blue-black shining species. Fore and middle tibiæ fringed with hairs *Psilozona*, g. n.

CABASA, Walk.

Dipt. Saund. i. p. 100 (1851); id., List Dipt. pt. vi. Suppl. 2. p. 499 (1854); Schiner, Verh. zool.-bot. Ges. Wien, xvi. pp. 652, 653, 703 (1866).

This genus was formed by Walker for one species from Tasmania, *Cabasa rufithorax*, which he later stated was a variety of *Dasympogon pulchellus*, Macq.; the second species from the same locality, which he named *Dasympogon venno*, had likewise been described previously by Macquart under *Dasympogon*.

The genus is allied to *Brachyrrhopola*, but easily distinguished by the humpbacked thorax. Schiner did not include it in his table. Walker omitted any mention of the presence of the curved spine on fore tibiæ, which is very distinct in the known species, which are small, the thorax bright-coloured, the abdomen blackish, the wings brownish. The antennæ long, the third joint nearly twice as long as the first two together.

The species as yet recorded in the genus are four, only the first two being from Tasmania, the others from Batchian and Aru Island.

Cabasa pulchella, Macq., Dipt. Exot. Suppl. i. p. 190, pl. vii. fig. 9 [*Dasympogon*] (1844). *Cabasa rufithorax*, Walker, Dipt. Saund. i. p. 100 (1851).

Cabasa rubrithorax, Macq., Dipt. Exot. Suppl. 4, p. 370 [*Dasympogon*] (1849). *Dasympogon venno*, Walker, List Dipt. ii. p. 359 (1849), et vi. Suppl. 2, p. 500 (1854).

Cabasa honesta, Walker, Proc. Linn. Soc. London, iii. p. 83 [*Dasympogon*] (1859), et v. p. 277 [*Dasympogon*] (1861).

Cabasa glabrata, Walker, Proc. Linn. Soc. London, v. p. 277 [*Dasympogon*] (1861).

Cabasa pulchella, Macq.

Cabasa rufithorax, Walker.

Macquart's type is in the Paris Museum, seen by me, 12. 4. 11, apparently a female.

Walker's type is identical, a female from Tasmania; others in Brit. Mus. Coll. from Hobart (*J. J. Walker*), a

male from Mackay, Queensland (*G. Turner*), and a specimen from Dandenong Ranges, Victoria, in Mr. French's Coll.

Macquart's description is as follows:—

Thorax red. Abdomen violet (σ), black (φ). Moustache black. Antennæ and legs black. Wings brown. Length 5 lines, σ φ . Palpi black, with black hairs.

Face shining black, with white tomentum at the sides; moustache plain, black. Forehead shining black. Antennæ: third joint fairly long, curved outwardly. Thorax shining red; with a black dorsal elongated spot, another at the base of wings, and one small black spot on shoulders. Scutellum black. Abdomen a brilliant violet (σ), black with green reflections (φ). Legs: anterior legs with small spine. Halteres yellow. Wings brown. In two specimens the male has the second posterior cell stalked; the female has it slightly so in the right wing, on the left one with no stalk but pointed at the base.

From Tasmania.

An easily recognized species.

Cubasa rubrithorax, Macquart.

Dasygogon venno, Walker.

Macquart's type (σ) seen in Paris Museum, 12. 4. 11. Walker's type is identical with it.

Walker's type (σ or φ ?) from Van Diemen's Land.

The species is only distinguished from *Cubasa pulchella* by the wings, which are brown on the basal half only as far as the apex of the discal cell, and is rather smaller in size.

Macquart's description is as follows:—

Length 3 lines, σ . Face and forehead black, with grey tomentum; moustache plain, yellowish. Antennæ: the first two joints black, the third is wanting. Thorax shining red, with a dorsal band and its posterior border blackish green; chest and scutellum black. Abdomen depressed, shining black, with faint green reflections. Legs black, almost naked; posterior tibiæ swollen at apex. Halteres fawn-coloured, large, becoming wider from base to apex. Wings: the two anterior thirds brown; the remainder hyaline; venation normal.

From Tasmania.

Cubasa glabrata, σ , Walker.

Type (σ) from Batchian.

This type and the following one Walker failed to recognize as belonging to the above genus created by himself.

It differs from *C. rubrithorax* and *C. pulchella* by its

wholly yellow *legs*, only the tarsi becoming brownish. *Thorax* and breast-sides the same colour as legs. *Abdomen* black. *Wings* pale brownish.

Cabasa honesta, ♀, Walker.

Type (♀) from Aru Island.

Distinguished by the colouring of the *legs* from the other species. *Legs* black, the coxæ, the extreme apices of femora, and the tibiæ (with the exception of the apices) reddish yellow. *Antennæ* black. *Thorax* black, but covered with brownish-yellow tomentum; breast-sides the same, with a broad shining reddish-yellow stripe. *Abdomen* blue-black, with narrow testaceous posterior borders.

CHRYSOPOGON, Röder.

Berlin. ent. Zeit. xxv. p. 213 (1881); id., Stett. ent. Zeit. liii. p. 243 (1892).

Founded for *C. crabroniformis*, Röder; *C. mülleri*. Röder, was added in 1892. The author distinguishes the genus from *Laparus*, Loew (now *Neolaparus*), by the stout spine on each side of the *thorax* and by the closed or very much narrowed first posterior cell; this last distinction will not hold good, as two of the species now added to this genus both have the cell open, but possess the stout spine on the thorax which will serve to divide the genus from *Neolaparus*. *Dasyzogon albopunctatus*, Macq., of which *Dasyzogon spinther*, Wlk., is a synonym, was placed by Schiner under *Neolaparus*, but belongs to this newer genus.

The genus will now include the following species:—

C. albopunctatus, Macq., Dipt. Exot. Suppl. 1, p. 193, pl. vi. fig. 7 [*Dasyzogon*] (1846): Schiner, Verh. zool.-bot. Ges. Wien, xvi. p. 700 (1866), et xvii. p. 369 [*Dasyzogon*] (1867). *Dasyzogon spinther*, Walker, List Dipt. ii. p. 337, et vi. Suppl. 2, p. 478 (1854).

C. crabroniformis, Röder, Berlin. ent. Zeit. xxv. p. 213 (1881).

C. mülleri, Röder, Stett. ent. Zeit. liii. p. 243 (1892).

C. fasciatus, sp. n.

C. punctatus, sp. n.

C. queenslandi, sp. n.

C. splendidissimus, sp. n.

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| 1. First posterior cell closed or narrower. | |
| Wings yellowish | 2. |
| First posterior cell open, hardly narrower. | |
| Wings brownish or hyaline | 3. |
| 2. Abdomen reddish yellow, with black spots. | |
| Antennæ yellow. Legs red, the femora black | <i>splendidissimus</i> , sp. n. |
| Abdomen black, with transverse yellow spots. Antennæ black. Legs red | <i>mülleri</i> , Röder. |

Abdomen reddish yellow, the base and third and fourth segments black	<i>crabroniformis</i> , Röder.
3. Abdomen black, with golden-yellow narrow bands	<i>fasciatus</i> , sp. n.
Abdomen reddish yellow, base and fourth segment black	<i>albopunctatus</i> , Macq.
Abdomen yellowish, with broad black bands on each segment	<i>queenslandi</i> , sp. n.
Abdomen black, with white spots	<i>punctatus</i> , sp. n.

Chrysopogon albopunctatus, Macq.

Dasyopogon spinther, Walker.

Type of *D. spinther*, Wlk., a male from W. Australia (*Clifton*), and other specimens from Freemantle (*J. J. Walker*) and Champion Bay, W. Australia (*Du Boulay*).

Walker's type agrees with the description given by Macquart, but in common with the other specimens it has a narrow black band on the posterior half of the second segment, which is also narrowly black anteriorly, and the femora have a black band on the upper sides in Walker's type and some of the specimens.

Macquart's type is not to be found in the Paris Museum.

Macquart's description is as follows:—

Thorax with testaceous tomentum, white-spotted. Abdomen testaceous, with white spots; the base and the fourth segment black. Moustache yellow. Legs testaceous. Wings reddish.

Length 9 lines (♀). Face with golden tomentum and moustache pale yellow. Antennæ: the first two segments testaceous, the third wanting. Forehead black, anteriorly with golden tomentum. Thorax with reddish-brown tomentum; spots on shoulders white tomentose, as well as two small spots at base of wings; sides with a transverse band of golden tomentum and two similarly coloured spots on each side of it; scutellum testaceous; a golden tomentose spot on each side of the metathorax. Abdomen: first segment black, second and third testaceous, fourth and anterior border of fifth black; rest of abdomen testaceous: a small yellowish-white tomentose spot on each side of the second, third, and fourth, on the posterior border. Legs testaceous, with a spine. Wings reddish; the centre of cells almost clear, the fourth posterior cell open.

New South Wales (*MM. Guérin, Reiche*).

The species is easily recognized by the yellowish abdomen with black bands; Macquart overlooked the spine on thorax. The third joint of *antennæ* is the same colour as the others, but twice as long as the two together, narrow, cylindrical. *Wings* brownish yellow on fore border, the first and fourth

posterior cells open but narrower at border, the small transverse vein beyond the middle of discal cell.

Chrysopogon crabroniformis, Röder.

In Brit. Mus. Coll. one female from Queensland.

Röder created the genus for this species.

A handsome black and fulvous insect, with a stout *abdomen* fulvous at base and apex, with a broad black band on the third and fourth segments. *Legs* fulvous. *Face* golden yellow, with a yellow moustache. *Wings* golden yellowish, dark brown at apex and pale brown on posterior border; the first posterior cell closed far from border, the fourth open, the anal cell not quite closed.

Length 20 mm.

Chrysopogon mülleri, Röder.

Described as black. Length 29–30 mm. From Victoria.

Face with yellow tomentum. Moustache pale yellow. *Antennæ* black. *Thorax* brownish, with three darker median stripes, with pale yellowish triangular spots on the shoulders, suture, and posterior border, and at apex of *scutellum*, the spine on each side of thorax is present. *Abdomen* at base pitchy black, from the third segment yellow, bordered on each segment with black, leaving yellow spots, which are small on the third, then larger, leaving only a black spot on the sixth segment. *Legs* very stout, deep red; tibiæ at apices darker. *Wings* tinged yellowish, with reddish veins; first posterior cell closed or very narrow.

Chrysopogon fasciatus, ♂ ♀, sp. n.

Type ♂ ♀, both from Mackay, Queensland (G. Turner).

A species with black golden-banded abdomen, red legs and antennæ, and greyish-brown wings; all posterior cells and the anal cell open.

Length, ♂ 17, ♀ 15 mm.

Black. *Face* covered with grey tomentum and greyish or yellowish short pubescence; moustache composed of only a few yellowish or whitish bristles. *Palpi* reddish, with some coloured pubescence. *Antennæ* reddish yellow, long; the first joint a little longer than the second, both with reddish-yellow hairs; third joint slender, nearly twice as long as the first two. *Forehead* black, with a few reddish-yellow hairs at sides. *Thorax* black, with some short fulvous tomentum on dorsum; shoulders and sides with golden tomentum; prothorax with a yellowish pubescent stripe, and thorax with similar stripes three in number; scutellum black, with

golden tomentum. *Abdomen* same width throughout, black, punctuated, the first segment black, the second and third with narrow golden tomentose bands posteriorly, the fourth and fifth with the same and with traces of another one on their anterior borders, the sixth almost wholly covered with golden tomentum; underside black, with broad greyish-yellow tomentose bands; genital organs of male not protruding, ovipositor of female developed on underside. *Legs* stout, red; coxæ black, with greyish tomentum; tarsi slightly brown; fore tibiæ with the curved spine black, posterior tibiæ swollen at apex. Halteres yellow. *Wings* brownish in male, greyish brown in female, paler at base, veins on fore border and at base yellow, elsewhere brown ♀, brown in ♂; first posterior cell open, not narrower at border; anal cell very narrow at border, small transverse vein just beyond the middle of discal cell. In spite of the first posterior cell being open, this species clearly belongs to the genus, having the spine on the thorax very stout and black.

Chrysopogon punctatus, sp. n.

Type (♂) and another from S. Queensland (*Dr. T. L. Bancroft*), 1908.

A handsome small black species marked with white spots. Legs black. Wings deep brown.

Length 12 mm.

Face covered with silvery-grey tomentum and with a central deep black stripe. Moustache of pale yellow bristles. Proboscis black, large. *Palpi* black, with black hairs and some white ones at base. *Antennæ* black, the third joint wanting. *Forehead* black. Prothorax, thorax, breast, and scutellum black. *Thorax* with four small spots, sides and base, stripes on breast and scutellum wholly, with glistening white tomentum. *Abdomen* black, same coloured spots on side of each segment. *Legs* black, the coxæ with glistening white tomentum. *Wings* brown, paler on hind border, and first posterior cell almost wholly hyaline.

Chrysopogon queenslandi, sp. n.

Type (♂) from Queensland (*C. M. Kelsall*), 1910; type (♀) from Queensland (*F. P. Dodd*), 1907.

A small yellow-and-black species, abdomen and legs short and robust. Prothorax much developed. Head as wide as thorax. Wings with all posterior cells open.

Length 14 mm.

Male.—*Face* blackish, with silvery-grey tomentum; moustache of pale yellow bristles arranged round oral

opening. *Palpi* blackish, with paler hairs. *Antennæ* reddish yellow; the first two joints small, with a few yellow hairs and black bristles on apex of second joint on lower border; the third joint bare, cylindrical, almost twice as long as the first two joints together; the small spine distinct, the style blunt, blackish. *Forehead* shining black in the centre. Hind border of head armed with two bristles, the short hairs round head are yellowish. *Prothorax* black. *Thorax* blackish brown, with grey tomentum; three black stripes visible; shoulders and sides covered with golden tomentum; breast black, with glistening white tomentum and with two shining blue-black stripes, the first one opposite the first pair of legs, the second one, which is blacker and subdivided, below the base of wings; the stout spine is black, placed just above the base of wings. *Scutellum* covered with golden-yellow tomentum. *Abdomen* yellow, black at base, and with broad black bands on anterior border of segments; on sides of segments a tomentose square grey spot appears. *Legs* reddish yellow; *coxæ* black, with grey tomentum; femora largely black; apices of tibiæ and the tarsi reddish brown or blackish. *Wings* clear, the first posterior cell a little narrower at opening; anal cell not quite closed; genital organs small.

Female similar to the male, but the dark bands on abdomen are wider and blue-black; ovipositor large, black. Legs more largely reddish.

A female from West Australia is probably a specimen of this species, though the black bands on abdomen are almost wholly obsolete.

Chrysopogon splendidissimus, ♂ ♀.

Type ♂, type ♀, and another male, all from West Australia; the males from Champion Bay (*H. Du Boulay*) and the female from W. Australia (*G. Clifton*).

A large handsome species with a reddish-yellow thorax and abdomen, the latter black at its base and on the sides of the third and fourth segments, underside black; antennæ and legs yellowish, femora black. Wings yellow, grey at apex and on inner border, the first posterior cell closed.

Length, ♂ 23–30 mm.; ♀ 23 mm. without ovipositor.

Fulvous. *Face* wrinkled, reddish with golden tomentum; the moustache composed of golden-coloured bristles bordering the mouth. *Palpi* reddish yellow with yellow hairs. The hairs round head above and below black. *Antennæ* reddish yellow, the first two joints with yellow pubescence; the third joint twice as long as the first two, with a short

rudimentary end style. *Forehead* same colour as face. *Thorax* black, reddish yellow on the dorsum, with golden tomentum, the spine reddish yellow; *scutellum* black. *Abdomen* the same width throughout; the first segment and anterior border of second black, shining; the third with an isoseeles triangular black spot at each side, the apices extending nearly to the middle of the segment along the posterior border; on the fourth there is a similar but ill-defined smaller spot in the female type, in the males the sides of the fourth and fifth segments are narrowly black, pubescence on dorsum chiefly fulvous, on the sides of abdomen black; underside wholly black; ovipositor of female short, fulvous; genital organs of male small, almost hidden, fulvous. *Legs* same colour as greater part of abdomen, the coxæ and femora shining black, with black pubescence. *Wings* yellowish, with yellow veins tinged with grey at apex and on inner border, all posterior cells except the first widely open, the anal cell open, but very narrow, at border, small transverse vein just beyond the middle of discal cell. Halteres yellowish.

The *antennæ* in this species and in *C. queenslandi* have the small style on the lower border of the third joint, and the upper border is excised and armed with a small spine. In the other species the end of joint seems broken off. Probably this characteristic will prove generic; the genus, however, is easily distinguished by the spine on thorax.

BRACHYRRHOPOLA, Macquart.

Dipt. Exot. Suppl. ii. p. 51 (1847).

This genus was formed by Macquart for his species *B. ruficornis*, from Tasmania, to which, later, a second species was added by Röder, originally named by Macquart *Dasyopogon maculinervis*; and Professor Röder added two new species, one of which, however, is a synonym of a species erroneously placed by Macquart under *Codula*, who also had described one species earlier under *Dasyopogon* which belongs to this genus.

The genus belongs to the group with a curved spine at end of fore tibiæ, and is characterized by the club-shaped *abdomen* and the *wings* with all posterior cells and the anal cell open. *Antennæ* hardly the length of head as Macquart states; the first joint a little long, the second short, the third three times as long as the first joint, nearly straight above, a little convex below, and attenuated at the base: Bigot in his description of the type (*sic*) of *B. maculinervis*

which he sent to Prof. Röder (see Wien. ent. Zeit. ii. p. 273) speaks of them as two and a half times as long as the head. *Legs* nearly naked, posterior femora with a few small bristles, the posterior tibiæ swollen at apex.

The following are the species as yet recorded in this genus, all from Australia and Tasmania:—

- B. limbipennis*, Macq., Dipt. Exot. Suppl. i. p. 190, pl. vii. fig. 8 [*Dasy-pogon*] (1844). *B. maculinervis*, Macq., Dipt. Exot. Suppl. iv. p. 369, pl. vi. fig. 8 *Dasy-pogon* (1849); Röder, Stett. ent. Zeit. liii. p. 242 (1892). *Dioctria tasmanica*, Walker, Dipt. Saund. i. p. 85 (1851), et List Dipt. vi. Suppl. 2, p. 388 (1854).
B. nitidus, Macq., Dipt. Exot. Suppl. i. p. 189 [*Dasy-pogon*] (1844).
B. ruficornis, Macq., Dipt. Exot. Suppl. ii. p. 52, pl. i. fig. 7 (1846). (Type of genus.) Röder, Wien. ent. Zeit. ii. p. 273 (1883) et Stettin. entom. Zeit. liii. p. 242 (1842); Froggatt, Australian Insects, p. 302 (1907).
B. fenestrata, Macq., Dipt. Exot. Suppl. iv. p. 374, pl. vii. fig. 2 [*Codula*] (1849). *B. victoria*, Röder, Stett. ent. Zeit. liii. p. 242 (1892).
B. maculata, Röder, Wien. ent. Zeit. ii. p. 274 (1883), et Stett. ent. Zeit. liii. p. 242 (1892).
B. fulva, sp. n.

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|---|----------------------------|
| 1. Wings hyaline, tinged yellow on fore border; abdomen and legs red | <i>nitidus</i> , Macq. |
| Wings brownish, hyaline in centre | 2. |
| Wings hyaline, brown at base | 3. |
| Wings hyaline, brown on the fore border | 4. |
| Wings anteriorly golden, with a transverse brown band | 5. |
| 2. Abdomen black with narrow yellow bands | <i>fenestrata</i> , Macq. |
| Abdomen reddish yellow, black at base and with black bands on apical segments | <i>fulva</i> , sp. n. |
| 3. Abdomen black with yellow bands | <i>ruficornis</i> , Macq. |
| 4. Abdomen reddish brown or blackish brown | <i>limbipennis</i> , Macq. |
| 5. Abdomen ochraceous, with the fourth segment and spots black | <i>maculata</i> , Röder. |

Brachyrrhopola limbipennis, Macq.

Brachyrrhopola maculinervis, Macq. [*Dasy-pogon*].
Dioctria tasmanica, Walker.

Type of *B. limbipennis*, ♀, Macq., seen in Paris Museum, 12. 4. 11, is a male, not a female as on label and in description, identical with a specimen of *D. tasmanica*, and comes from Tasmania.

The type of *B. maculinervis*, described as a mutilated headless female, appears from the description and the figure of the wing to be identical with Macquart's earlier species.

In Brit. Mus. Coll.: type of *D. tasmanica*, a male, from Tasmania, and a male and female from Melbourne (*French*); others from Burpengary, S. Queensland (*Dr. T. L. Bancroft*),

and from Hobart (*J. J. Walker*). In Mr. French's coll. specimens from Victoria.

A species easily recognized by the dark colouring on fore border of wing. Reddish brown, with two yellowish narrow segmentations on abdomen.

Type (♂) 12 mm. Bigot gives 18–21 mm. for *B. maculiverris*. Specimens range from 12–20 mm.

Face covered with greyish or yellowish tomentum, and with two black shining stripes starting together from below the antennæ and becoming broader and separated below. Moustache of many weak white bristles continued up the face as whitish hairs. *Palpi* large, red, with many black bristly hairs. *Antennæ* red, the first two joints with black hairs; the third about twice as long as the first two together, with a distinct style. *Forehead* black, shining, with numerous long white hairs. *Thorax* reddish, black on dorsum, with scanty white pubescence, sides reddish, black anteriorly, with three greyish or yellowish tomentose stripes, one on the prothorax and the others above the second and third pairs of legs. *Scutellum* reddish. *Abdomen* reddish, shining, somewhat darker at base, the third and fourth segments with very narrow pale yellow posterior borders; hairs at sides whitish, and a little pubescence of the same colour on dorsum. Genital organs in male prominent, with long white pubescence; in the female the ovipositor small, ending in a circle of spines. *Legs* the same colour as abdomen, the tibiæ at base bright yellow, femora largely black below, bristles black. *Wings* large, hyaline, with deep brown colouring on the fore border, extending from the base to the apex, filling the first broad cell and the base of the second one, reaching across the base of it and of discal and fourth posterior cells, then bordered by the third longitudinal vein till it reaches the fork, where it spreads slightly beyond the posterior vein of fork, leaving the apex of second submarginal cell clear.

This description is chiefly taken from Walker's type and from the specimen identified with *D. limbipennis*, both males, together with a female from Melbourne.

Some of the other specimens vary in the following particulars, but appear to be the same species, none of them varying in the extent of colouring of the wing:—The *face* is black in the centre or reddish. Moustache black. Only the posterior tibiæ are yellow at base, or none are yellow, the knees above representing this colour. The yellow segmentations on *abdomen* are absent.

[To be continued.]